

STRESSORS CONTRIBUTING TO DEPRESSION AMONG FIRST YEAR MEDICAL STUDENT

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ABSTRACT

Stress is the negative emotional and physiological process that occurs as individuals try to adjust or to deal with the stressors which are environmental circumstances that disrupt or threaten to disrupt individuals daily functioning. The aim of this study to explore the psychological effects of distress and its contributing stressors among first year medical student primarily to investigate the prevalence of depression and stress levels and factors contributing stress among first year medical students' enrolled in Bachelor of Medical and Surgery in MARA University Technology (UiTM) Sungai Buloh Campus. The researcher intends to distribute questionnaire to the study participants through convenience sampling using the MSSQ stable psychometric instrument to measure sources of stress among medical students and at the same time putting into consideration all ethical practices.

Keywords: stressors, depression, psychological distress, medical student, UiTM, Malaysia

1.0 INTRODUCTION

The aim of this study is to explore the psychological distress and its contributing stressors among first year medical student. Studying medical science often remains a stressful task for majority of undergraduate students in most of the medical schools, globally (Salam *et al.*, 2013). Medical school expected to be a time of personal development, achievement, growth and well-being. However, research identifies that there are many negative effects on students' mental health due to issues faced by these students (Solanky, Desai, Kavishwar, & Kantharia, 2012; Fuad *et al.*, 2015). Studies have quoted high prevalence of stress in medical students, ranging from 21% to 56%, particularly in the first year as the students face difficult moments in adjusting to new environment of medical training atmosphere (Salam, 2014). Such stress has been reported right from enrolment (Salam, 2013).

Distress in medical school is an issue that persists on throughout the years of study till internship (Yusoff & Rahim, 2010; Ali *et al.*, 2012). Medical students are exposed to regular pressure with overwork of academic burden and examination that brings various changes in their daily routine such as lack of sleep, irregular diet, smoking and substance abuse in order to cope with stress. It is also reported that the transition from pre-clinical to clinical training which is known to be the crucial stage in medical school is a stressful time period for medical student (Solanky *et al.*, 2012). All this can result in decreased life satisfaction which leads to symptoms of depression among medical students. Research findings suggest that there is a relationship between heightened stress among students and high prevalence of depression (Yusoff & Rahim, 2010). Prolonged exposure to stressful environment may lead to negative consequences either at personal, societal or professional level (Yusoff *et al.*, 2011; Solanky *et al.*, 2012; Fuad *et al.*, 2015). Studies have highlighted that depression in medical students becomes twice as prevalent between the beginning and end of the first year (Yusoff & Rahim., 2010).

Depression is predicted to be the leading cause of disease burden by 2030 (Fuad *et al.*, 2015 Medicine Journal Master). Studies have reported high prevalence of psychological distress among medical students due to various reasons (Yusoff *et al.*, 2011; Yusoff & Rahim 2010). Untreated prolonged depression leads to suicide among university students. An increase on suicide attempts and suicide cases is reported by the public and private universities in Malaysia (Ali *et al.*, 2012). Hence in this research intends to focus on the area of depression among medical students particularly first year students. Mental health issues has always been a great concern in the field of education. Early detection of stressors among medical students may prevent unwanted consequences on their mental health and overall wellbeing. Thus, this study aims to identify the prevalence of psychological distress (stress and depression) among first year medical students as well as the possible causes of stress by identifying the main stressor factors that contributes to depression.

1.1 Possible Causes of Stress

It was cited that tertiary education is highly stressful to students generally (Salam, Yousuf, Muhammad, Haque, 2014; Habeeb, 2010). However, medical education is even more stressful as evidenced by high prevalence of stress among medical students, compared to other profession (Jeong, 2010). In the United States, 26% of the medical students had depression compared to 22% of pharmacy students (Stecker, 2004). Stress is a negative emotional and physiological process that occurs as individuals try to adjust or to deal with the stressors which are environmental circumstances that disrupt or threaten to disrupt individuals daily functioning (Bernstein *et al.*, 2003). In other words, stress involves a transaction between people and their environment. Stress is not a specific event but a process in which the nature and intensity of stress responses depend to a large degree on factors such as the way people think about stressors and the skills and resources on has available to cope with them.

The sources of stress for medical students vary year in training. The first year medical student is faced with the challenges of being uprooted from family and friends and adapting to a demanding new learning environment. Besides, the pressure to master large volume of information and likewise to compete with other students. Additionally, student abuse, and exposure to human suffering can also be sources of distress among the first year medical students.

Nevertheless, this study will explore the contributing factors that leads into UiTM medical student's academic depression, as it was revealed that these students received full scholarship covering their tuition, hostel and monthly stipends and only need to pay RM 200 to RM 350 which is required to be paid in the beginning of every semester as an enrolment fee despite these incentives, there still increase of depression among these medical students.

1.2 Research Question

These questions will provide insight into the phenomenon of first year medical distress issue, and may lead both academic counsellor and medical educators to better understand the phenomenon of medical students most especially the fresher. The researcher anticipate that the statistics in this proposed research study will provide effective programs that will assist first year medical students to handle stress more effectively through positive coping mechanisms.

- i. What is the significant relationship between academic related stressors and depression among first year medical students?
- ii. What is the significant relationship between drive & desire related stressors and depression among first year medical students.

1.3 Theory of Depression

This study will anchor on theory Martin Seligman's Learned Helplessness Theory of depression (1974) In order to have a better understanding of stress, and develop a framework to give this study a proper direction.

1.3.1. Martin Seligman's Learned Helplessness Theory of Depression (1974)

Martin Seligman (1974) proposed a cognitive explanation for understanding depression called learned helplessness. According to Seligman's learned helplessness theory, depression occurs when an individual learns that one's attempt to escape negative situations make no difference. As a consequence individuals become passive and will endure aversive stimuli or environments even when escape is possible. Seligman based his theory on research using dogs.

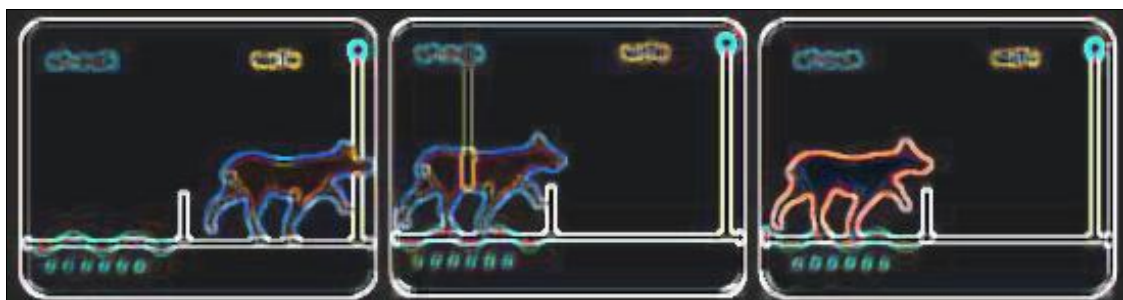


Figure 1: Learned helplessness theory by Martin Seligman (1974)

A dog put into a partitioned cage learns to escape when the floor is electrified. If the dog is restrained whilst being shocked it eventually stops trying to escape. Dogs subjected to inescapable electric shocks later failed to escape from shocks even when it was possible to do so. Moreover, the dogs exhibited some of the symptoms of depression found in humans (lethargy, sluggishness, passive in the face of stress and appetite loss).

This led Seligman (1974) to explain depression in humans in terms of learned helplessness, whereby the individual gives up trying to influence the environment because the individual have learned to be helpless as a consequence of having no control over what happens to them. Further, research has shown that the way individuals view the negative events that occurs in their life have an impact on whether an individual feel helpless or not (Barber & Winefield, 1986). Abramson, Seligman, and Teasdale (1978) consequently introduced a cognitive version of the theory by reformulating learned helplessness in term of attributional processes (i.e. how people explain the cause of an event).

An attribution is the factor that a person blames for the outcome of a situation. Attributions can be made for both positive and negative events. Seligman (1974) suggests that certain individuals have adopted a set of beliefs- a depressive explanatory style. It consists of negative beliefs such as “it’s because of my stupidity that I am unable to complete my task”, “I am not competent at anything”, “I am an unlucky individual”. These internal set of statements add up to the belief system in one’s own helplessness and to engage in a depressive reaction likely.

1.3.2. Relation of Theories Used To the Present Research

Martin Seligman’s Learned Helplessness Theory of depression (1974) revealed that depression is a highly heterogeneous condition, and identifying how symptoms present in various groups may greatly increase our understanding of its etiology. (Moore, Neale, Silberg, & Verhulst, 2016). Hence as suggested by famous theorists Martin Seligman there are underlying manifesting reasons that drives an individuals into depression. Depressed individuals tend to view oneself as helpless, worthless, and inadequate. They interpret events in the world in an unrealistically negative and defeatist way, and these individuals’ views the world as posing obstacles.

Finally, these individuals views the future as totally hopeless because of their own worthlessness and capacity in handling the situation. In identifying the contributing stressors to depression among medical student in the proposed research, this will produce a better understanding in the framework of depression and its stressors among medical student.

1.4 Research Framework

This section describes the proposed research framework based on the scope of the research. The proposed framework takes into consideration the research objectives and questions that were derived from the problem statement.

The independent variables identified in this research are the 6 domains of stressors namely ARS, IRS, TLRS, SRS, DDRS and GARS. The dependent variable is to identify the significant relationship between the 6 domains of stress and depression among the first year medical students. In testing the above hypothesis, this research aims to investigate whether these 6

contributing stressors has a significant relationship with depression levels among the medical students. The research also further aims to identify which of these 6 contributing factors has the highest significant scores with the depression levels among the medical students.

2.0 METHODOLOGY

The intent of this proposed study is summarizing the central themes of first year medical students as revealed based on previous literatures. Thus, this study intention is to investigate the prevalence of depression and stress levels and factors contributing to the faced stress. A questionnaire consisting of three sections will be used to gather data. The target population of this research is first year medical students' enrolled in Bachelor of Medical and Surgery in MARA University Technology (UiTM) Sungai Buloh Campus. The participant of this study will be selected through convenience sampling.

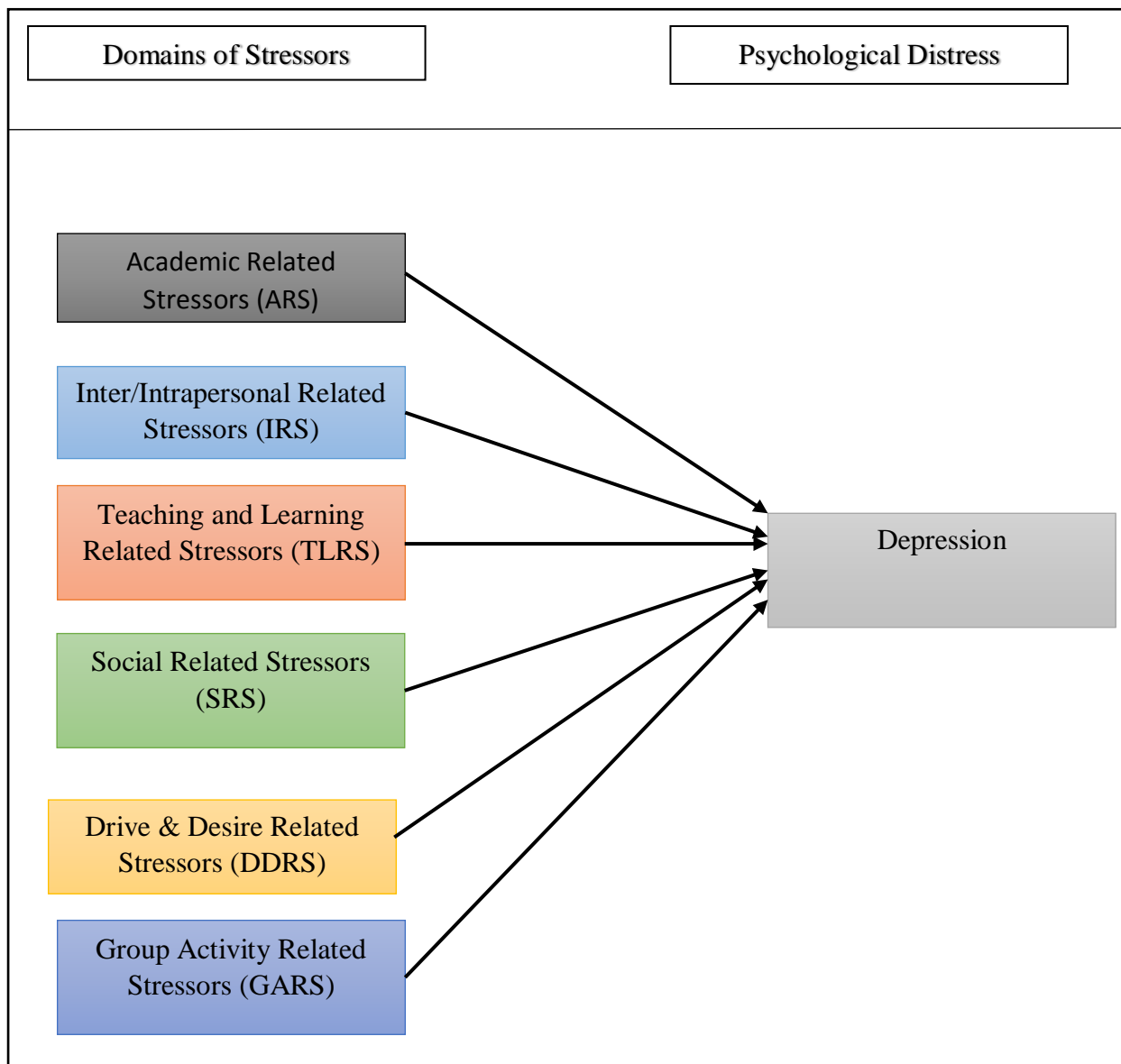


Figure 2: The research framework for stressors contributing to depression among first the research framework for stressors contributing to depression among first year medical students.

2.1 Participants

The participants of this study will be predominantly first year medical students. Thus, this research will be conducted at the MARA University of Technology (UiTM), Sg Buloh Campus Malaysia. The subjects of this study will consist ($S=152$) first year students pursuing Bachelor Degree in Medicine and Surgery (MBBS) at the university. The total number of sample taken from the population will be based on sample size determination using Krejeric & Morgan (1970) model. Based on the table below the total population in the first year medical students pursuing Bachelor Degree in Medicine and Surgery at the university is ($N=250$) hence the chosen sample size is ($S=152$).

Table 1: Adopted from the Krejcie & Morgan (1970) model of sample size determination for research activities.

N (Population)	S (Sample)
220	140
230	144
240	148
250	152

2.2 Ethics Practice

In collecting the data, an approval for this research will be obtained from the Vice Chancellor of UiTM Sg Buloh Campus. The design, aim, benefits for UiTM students and future aspirations of the research will be presented to the Vice Chancellor. Both oral and written permission will be obtained from the administrators especially the Vice Chancellor before commencing on the actual research. Equally, the questionnaire will be distributed to the students during the research week colloquium that will be conducted once in a semester. Issues of privacy and confidentiality will be explained to students. To ensure confidentiality, participants will not be required to record their names. Informed consent will be distributed to participants. Participants will have to consent their participation in this research.

2.3 Instruments

A questionnaire consisting of 3 sections will be distributed to students. Section one will includes the demographic information which includes age, gender, religion, ethnic background and obtained CGPA, Section two will includes the Beck Depression Inventory Scale (BDI) questionnaire which measures the severity of depression, while Section three will includes the MSSQ-40 questionnaire which will be used to determine the stressors that contributes to students' depression levels accordingly.

2.3.1 Beck Depression Inventory (BDI)

The BDI is a self-rating scale that measures the severity of depression and can be used to assess the progress of treatment. It consists of twenty-one items and is designed for multiple administrations. This inventory was developed by a psychiatrist Aaron Beck in 1972 who earned his PHD in psychiatry from Yale University in 1946 (Beck, 1961). It has shown good psychometric properties with an internal consistency for the BDI ranging from .73 to .92 with a mean of .86 (Beck, Steer, & Garbin, 1988).

The BDI includes 21 symptoms checklist items that represent the severity of symptoms, each of which is scored on a 4-point scale from 0=low to 3=high. Participants will be asked to pick the statement that best describes their situation over the past two week. Total scores range from 0 to 63, with a higher score indicating more severe depressive symptoms and ranges are divided as follows: ≤ 4 = very minor depression or no depression; 5–13 = mild depression; 14–20 = moderate depression; ≥ 21 =severe depression. Items consists of statements, “As I look back on my life, all I can see is a lot of failures.”, “I feel the future is hopeless and that things cannot improve.”, “I am so sad and unhappy that I can't stand it.”, and “I feel quite guilty most of the time.”

2.3.2 Medical Student Stressor Questionnaire (MSSQ-40)

The Medical Student Stressor Questionnaire manual and scoring guide is developed by Muhamad Saiful Bahri Yusoff in the year 2010 (Yusoff & Rahim, 2010) The purpose of the Medical Student Stressor Questionnaire (MSSQ) is to identify sources of stress in medical students that is grouped into 6 main domains namely: 1) Academic Related Stressors, 2) Inter/Intrapersonal Related Stressors, 3) Teaching and Learning Related Stressors, 4) Social Related Stressors, 5) Drive & Desire Related Stressors, and 6) Group Activity Related Stressors. The MSSQ is a self-report, self-scoring instrument with 40 items that ask students to rate the intensity of stress caused by each item on a scale of 0-4 (causing no stress to causing extreme stress). Students will be required to identify the possible sources of stress. Respondents will be asked to rate each event in themselves during the recent weeks by choosing from five responses: ‘causing no stress at all’, ‘causing mild stress’, ‘causing moderate stress’, ‘causing high stress’ and ‘causing severe stress’.

The MSSQ is stable psychometric instrument to measure sources of stress among medical students. The study conducted by Yusoff (2013) provides evidence for the stability of the MSSQ-40 in measuring Stressors among medical students. The reliability and validity data is solid and a validated instrument; however it has only been used on Malaysian medical students (Yusoff & Rahim, 2010). The MSSQ Cronbach’s alpha values at different intervals ranged between 0.96 and 0.97 indicating a high level of internal consistency (Yusoff, 2013).

3.0 FINDINGS AND DISCUSSION

Presently, this study has not embarked on any form of fieldwork, thus no significance result has been produced. However, the researcher searched and utilized literatures specifically in the medical field such as Medline and PubMed, Science Direct, Google scholar databases for peer-reviewed articles on medical students' distress in Malaysia. Searched terms used combinations of the terms: Malaysian, medical student, trainee, stress, anxiety, depression, psychological

distress, anxiety disorder, emotional disorder, mental health, emotional stress etc. The reference gradient of the retrieved articles was also checked to find the comparable articles. Based on literature exploration, it was revealed that medical students truly suffered from depression which not only affects their personal lives but their professional and academic lives as well. Further search on the prevalence issue of stress among first year medical students, also exposed that university students, especially freshmen, were risk subjects of stress due to transitional nature of university life. However, intrapersonal sources of stress resulted from internal factors and academic factors that caused by university-related activities and concerns were said to be the common stressors of depression among first year medical students.

Majority of these stressors sources was said to be the outcome of medical curriculum which is highly stressful. Students were to mastered huge amount of course in a short period of time. Thus, this study through is fieldwork aim to identify stressors contributing to depression among first year medical student in order and come up with a meaningful recommendation on how this issue can be alleviated.

This study is designed primarily to investigate the prevalence of depression and stress levels and factors contributing to the faced stress among first year medical students' enrolled in Bachelor of Medical and Surgery in MARA University Technology (UiTM) Sungai Buloh Campus. Conversely, The researcher, aim that the outcome of this study can be applied for further health education program and to take applicable methods for the deterrence of stress among first year medical students in Malaysia.

Based, on previous related studies, it was revealed that indeed medical students experience a relatively high level of personal distress, with adversarial significances on academic performance, proficiency, professionalism, and health matters. It is imperious that medical college educator understand the incidences and causes of student distress, adverse consequences on personal and professional well-being, and institutional factors that has an impact on student's health.

4.0 CONCLUSIONS

In summary, it is obvious that medical education is generally perceived as being stressful and challenging. High rates of psychological morbidity among students, such as anxiety and depressive symptoms, have been reported in several studies. Common stressors such as academic matters, time pressure, work load content, time management, personal problems causes differences in the overall pattern of stressors. Medical students are exposed to regular pressure with overwork of academic burden and examination that brings various changes in their daily routine. Failing to cope with stress effectively causes deterioration of academic and professional performances and increases the psychological distress.

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